NASA Facts

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Careers in Aerospace Technology

Has it happened to you? Have you started thinking about the year 2000? If you are a student now, you will be spending most of your life in the 21st century, and the future may offer many unpredictable opportunities.

It will be a time of space stations, robotic probes, moon outposts, and manned missions to the surface of Mars. All this, and more scientific accomplishments that have not even been dreamed of, will happen because Americans want to live and work in space.

Where Will You Be in 10 Years?

To be ready for the 21st century, the world will need aerospace scientists, engineers, technologists, and technicians.

What Could An Aerospace Technology Career Mean for You?

Aerospace workers are professionals who work independently or as part of a team. They conduct research, and design and develop vehicles and systems for atmospheric and space environments. Individuals who are successful in aerospace careers have the proper educational background, possess good communication skills, and are committed to being part of a team.

A wide variety of aerospace career fields offers opportunities for high job satisfaction and excellent compensation.

What Education Will You Need Beyond High School?

A career in aerospace as a scientist or engineer requires four to seven years of college study following high school. A bachelor's degree requiring four years of study is the minimum necessary to enter this field. Colleges and universities also offer graduate programs where students can obtain master's and doctoral degrees. The master's program usually takes two years. An additional two to four years is needed to earn a doctorate.

A starting position as an engineer, mathematician, physical scientist or life scientist requires a bachelor's degree. (A master's and/or doctoral degree is highly desirable in life sciences.) Some examples of engineering degrees required for aerospace technology are: electrical/electronics, aerospace, and mechanical. Other types of bachelor's degrees that may lead to aerospace careers are: physics, chemistry, geology, meteorology, mathematics, experimental psychology and biology.

Engineering technicians typically earn a two-year Associate of Science degree. Some may continue for two additional years and obtain a bachelor's degree in engineering technology. Others may earn a bachelor's degree in engineering or one of the physical sciences. A few complete a five-year apprenticeship program offered at some NASA field centers.

How Do You Know If You Want An Aerospace Career?

If you think you would be interested in a career in aerospace technology, check your potential for success by answering these questions:

- Do you enjoy math and science?
- Do you have an inquisitive and searching mind?
- Are you interested in knowing what makes things work?
- Do you like to solve problems and puzzles?
- Do you like to create things?
- Do you enjoy learning?
- Do you enjoy working with computers?
- Do you like to build things?
- Are you prepared to study hard and do homework?
- Do you achieve good grades?

If you answered yes to most of the questions, you may want to consider an aerospace career.

What Should You Do To Prepare For An Aerospace Career Now?

Education is a critical requirement. What are your favorite subjects? Mathematics and science are the basis for an aerospace technology career. Decisions you make in school can affect your career

possibilities. Some of the recommended high school courses are listed below.

Algebra
Geometry
Trigonometry
Math Analysis
Calculus
Computer Mathematics
Biology
Chemistry
Physics
English

How Can You Find Out More About Aerospace Jobs?

Contact people working in the aerospace field such as scientists, engineers and technicians. Your teacher or guidance counselor should be able to arrange this for you or your class. Visit your school and public libraries to get names of professional organi-zations you can contact for more information. Contact the NASA personnel office closest to you if you would like additional information.

Some Kinds of Aerospace Careers

Pilots or Crew Members of a Spacecraft
Pilot Astronaut
Mission Specialist
Payload Specialist

Physical Scientists
Astronomer
Chemist
Geologist
Meteorologist
Physicist
Oceanographer

Life Scientists
Biologist
Medical Doctor
Physiologist
Nutritionist
Psychologist

Social Scientists
Economist
Sociologist

Mathematicians
Computer Scientist
Mathematician
Systems Analyst
Statistician

Engineers
Aerospace/Astronautics
Chemical
Civil
Biomedical
Computer
Electrical
Industrial
Environmental
Materials
Mechanical
Nuclear
Petroleum
Plastics
Safety
Systems

Technicians
Electrical/Electronics
Engineering
Aerospace Model
Aircraft
Avionics
Fabrication
Materials
Pattern Maker and Molder

Engineering Designers
Architectural
Electrical
Mechanical

Technical Communicators
Writer
Artist
Editor
Education Specialist
Public Relations
Audiovisual Specialist
Photographer

Other Fields
Quality Control Inspector
Ground Radio Operator
Teletypist

What Are Engineers?

Engineers are people who make things work. The work and ideas of engineers make achievements possible. They put power and materials to work. Engineers have moved America into skyscrapers, high speed cars, jets, and space vehicles. They make life interesting, comfortable, and fun. Computers, television, and satellites--products of the communication industry--depend on engineers. Engineers will design safe and comfortable space stations for the 21st century.

What Are Technicians?

Technicians are an important part of the aerospace team. They work closely with scientists and engineers in support of their research. Their skills are used to operate wind tunnels, work in laboratories, construct test equipment, build models and support many types of research.

What Are Scientists?

Scientists are knowledge seekers, always searching out why things happen. They are inquisitive. This means they are always questioning. They possess a sense of wonder. Nature, Earth, and all the universe are what fascinate the scientist. The scientist questions, seeks answers, and expands knowledge.